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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/443,793	11/18/1999	DAVID E. ALBRECHT	505-02	7726

2746 7590 10/30/2006

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EXAMINER

PICKARD, ALISON K

ART UNIT	PAPER NUMBER
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3673

DATE MAILED: 10/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/443,793

Applicant(s)

ALBRECHT, DAVID E.

Examiner

Alison K. Pickard

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 28-35 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 28-35 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

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DETAILED ACTION

1. In view of the brief filed on 8-4-06, PROSECUTION IS HEREBY REOPENED. A new rejection is set forth below.

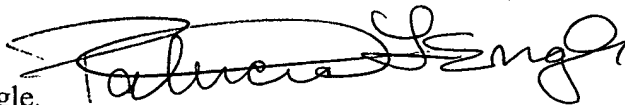
To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

Patricia Engle.



Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 28-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Breaker (5,518,257) in view of Rode.

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Breaker discloses an apparatus for an hydraulic fluid system (see Fig. 28) comprising a fluid component 40 or 42; a planar, one-piece plate 2016 having an opening with a boundary and comprising a path for the fluid; a non-threaded annular seal 2014 within the boundary, forming the sole seal means, and comprising an o-ring 2028; and, a non-threaded, metal, support ring 2081 disposed within the annular seal and having at least one orifice 2087 that provides a fluid connection between the opening and annular seal. The orifice comprises a passage having an end with is immediately adjacent to the fluid path. And the orifice has an axis that is parallel to the surfaces of the plate. The support ring has an outer surface that is chamfered (near line 2020) and faces the inner portion of the annular seal. Breaker does not appear to disclose bolt holes in the plate. Rode teaches an apparatus between port faces having a plate, seal, and support ring. As seen in Figure 8, the plate 102 can be provided with bolt holes to confine and secure the apparatus with the face (see col. 4, line s25-33). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the plate of Breaker with the bolt holes to secure the apparatus in place as taught by Rode.

Regarding claims 31 and 35, Breaker does not appear to disclose that the chamfers make an angle of about 45 degrees. It is not considered inventive to discover the workable or optimum ranges by routine experimentation absent the showing of criticality for such ranges. See *In re Aller*, 105 USPQ 233, 235 (CCPA 1955). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to make the angles about 45 degrees.

4. Claims 28-30 and 32-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson (5,765,835) in view of Aichroth (3,167,322) in view of Jones (2,278,721).

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Johnson discloses an apparatus providing a seal between two port faces comprising a planar, one-piece plate 33 having plural bolt holes 25 and an opening. A seal (o-ring) 41 is disposed within the boundary of the opening. A support ring 29 is disposed within the seal. The plate 33 has a pair of parallel surfaces. The opening allows a flow path perpendicular to the plate (see Fig. 1) and adjacent to the support ring. The support ring is chamfered (at 31) on an outer portion. Johnson does not disclose the seal is annular (i.e. circular). Aichroth teaches an apparatus providing a seal between port faces comprising a plate, seal, and support ring. Aichroth teaches that the apparatus can be circular or rectangular. Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to make the seal (and therefore, the apparatus) annular as such are considered art equivalent shapes as taught by Aichroth.

Johnson does not disclose that the support ring has an orifice providing a fluid connection between the opening and seal. Jones teaches a seal between two port faces (of items 4 and 1, seen best in Figures 2 and 3). The seal comprises a support ring 38 disposed within a seal 46. Jones teaches using an orifice 39 to provide a fluid connection between the opening (i.e. inner circumference of the ring 38) and the seal 46 to ensure a fluid tight seal. The orifice allows fluid pressure to press the seal upward, outward, and downward into fluid sealing abutment with the surfaces of the joint (see page 2, line 73 through page 3, line 10). (Note: the seal of Jones is oriented between two surfaces similar to those of Johnson. The orifices of Jones are arranged generally parallel to these surfaces and would be arranged parallel to the surfaces of Johnson. Also, the end of the orifice would be immediately adjacent and in connection with the path because the support ring is.) Therefore, it would have been obvious for one of ordinary skill in

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the art at the time the invention was made to modify the support ring of Johnson with the orifices taught by Jones so that fluid pressure within the opening is communicated to the seal to force it into fluid tight sealing engagement and prevent leakage through the joint.

5. Claims 28-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aichroth in view of Rode (3,561,793) in view of Jones.

Aichroth discloses an apparatus providing a seal between port faces comprising a planar, one-piece plate 26 having an opening. A seal (o-ring) 22 is disposed within the boundary of the opening. A support ring 24 is disposed within the seal. The plate 26 has a pair of parallel surfaces. The opening allows a flow path perpendicular to the plate. The support ring is chamfered (at 32) on an outer portion. Aichroth does not disclose the plate 26 had plural bolt holes. Rode teaches an apparatus between port faces having a plate, seal, and support ring. As seen in Figure 8, the plate 102 can be provided with bolt holes to confine and secure the apparatus with the port faces (see col. 4, lines 25-33). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the plate of Aichroth with bolt holes as taught by Rode to secure the apparatus in place.

Aichroth does not disclose that the support ring has an orifice providing a fluid connection between the opening and seal. Jones teaches a seal between two port faces (of items 4 and 1, seen best in Figures 2 and 3). The seal comprises a support ring 38 disposed within a seal 46. Jones teaches using an orifice 39 to provide a fluid connection between the opening (i.e. inner circumference of the ring 38) and the seal 46 to ensure a fluid tight seal. The orifice allows fluid pressure to press the seal upward, outward, and downward into fluid sealing abutment with the surfaces of the joint (see page 2, line 73 through page 3, line 10). (Note: the seal of Jones is

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oriented between two surfaces similar to those of Aichroth. The orifices of Jones are arranged generally parallel to these surfaces and would be arranged parallel to the surfaces of Aicroth. Also, the end of the orifice would be immediately adjacent and in connection with the path because the support ring is.) Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the support ring of Aicroth with the orifices taught by Jones so that fluid pressure within the opening is communicated to the seal to force it into fluid tight sealing engagement and prevent leakage through the joint.

Regarding claims 31 and 35, Aichroth discloses two chamfers 32 at an angle with the axis of the support ring. However, Aichroth does not disclose that the angle is about 45 degrees. It is not considered inventive to discover the workable or optimum ranges by routine experimentation. See *In re Aller*, 105 USPQ 233, 235 (CCPA 1955). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to make the chamfer at an angle of 45 degrees.

6. Claims 28-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aichroth in view of Rode in view of Breaker.

Aichroth discloses an apparatus providing a seal between port faces comprising a planar, one-piece plate 26 having an opening. A seal (o-ring) 22 is disposed within the boundary of the opening. A support ring 24 is disposed within the seal. The plate 26 has a pair of parallel surfaces. The opening allows a flow path perpendicular to the plate. The support ring is chamfered (at 32) on an outer portion. Aichroth does not disclose the plate 26 had plural bolt holes. Rode teaches an apparatus between port faces having a plate, seal, and support ring. As seen in Figure 8, the plate 102 can be provided with bolt holes to confine and secure the

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apparatus with the port faces (see col. 4, lines 25-33). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the plate of Aichroth with bolt holes as taught by Rode to secure the apparatus in place.

Aichroth does not disclose an orifice in the support ring. Breaker teaches an apparatus between port faces comprising a plate, seal, and support ring. Breaker teaches using an orifice in the support ring to provide fluid communication between the opening and the annular seal. Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to use the orifice to provide fluid communication as taught by Breaker.

Regarding claims 31 and 35, Aichroth discloses two chamfers 32 at an angle with the axis of the support ring. However, Aichroth does not disclose that the angle is about 45 degrees. It is not considered inventive to discover the workable or optimum ranges by routine experimentation. See *In re Aller*, 105 USPQ 233, 235 (CCPA 1955). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to make the chamfer at an angle of 45 degrees.

Response to Arguments

The prosecution has been reopened in view of the disclosure of Breaker 5,518,257. Except for the boltholes, Breaker discloses all of the limitations required by Applicant's claims. Further, Breaker teaches the use of orifices in a support ring to provide fluid communication to the seal. Thus, Breaker has been used to modify (at least) Aichroth. The previous rejections using Aichroth, Rode, Jones, and Johnson have all been maintained because the examiner found Applicant's arguments unpersuasive. The remarks made in the final rejection of 3/21/06 are still considered relevant. Additionally the examiner would like to point out that the hydraulic fluid

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system is NOT being positively claimed in the claims. The term “for” used in the preamble indicates intended use, not a positive recitation. Thus, Johnson is still applicable. However, even if the hydraulic fluid were being positively claimed, Aichroth and Breaker both disclose systems used with liquids. Also, the argument that Aichroth does not disclose a plate is unpersuasive. Element 28 is flat, which meets (at least) the “ordinary meaning” argued by Applicant on page 24 of the brief. And the modification with boltholes in view of the teachings of Rode is obvious.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alison K. Pickard whose telephone number is 571-272-7062. The examiner can normally be reached on M-F (10-7:30), with alternate Friday's off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tricia Engle can be reached on 571-272-6660. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Alison K. Pickard
Primary Examiner
Art Unit 3673

AP